

Notice of Allowability

Application No.

09/993,336

Examiner

Elias Desta

Applicant(s)

RAJGURU, CHAITANYA S.

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed July 15, 2004.
2. ☒ The allowed claim(s) is/are 1, 2, 6-8, 12-14, 18-21 and 26-35.
3. ☒ The drawings filed on 17 July 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 10/07/2004.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

HAL WACHSMAN
PRIMARY EXAMINER

Detailed Action

Examiner's Amendment

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Applicant indicated that claim 25 is cancelled, and claims 27 and 28 now depend from claim 26, hence claims 27 and 28 now read:

- 27. The method of claim 26, wherein the second capacity value is reset by resetting the output voltage level of the charge pump.
- 28. The method of claim 26, wherein the second number of flash memory cells is greater than the first number of memory cells.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Kenneth F. Kozik on October 7, 2004.

Response to Applicant's Remark

2. Applicant's remark, see amendment, filed on July 19, 2004, with respect to claims 1-35 is fully considered. The Examiner acknowledges the cancellation of claims

19, 20, 21 and 25. The amended claims 1, 7 and 13 are further considered. In reference to claims 27 and 28, see Examiner's Amendment above.

Allowance

3. Claims 1, 2, 6-8, 12-14, 18-21 and 26-35 are allowed. The following is an examiner's statement of reasons for allowance:

In reference to claims 1, 7, 13, 26, 30 and 35: Kawahara et al. teaches an apparatus for generating an internal voltage for a low voltage flash memories (see Kawahara et al., Abstract). The apparatus includes:

- A charge pump having a capacity that is preset to a particular value (see Kawahara et al., page 126, 1st column, paragraph 3 to 2nd column, paragraph 1, and Fig. 1).
- A measuring circuit to measure the actual capacity of the charge pumps and to reset the capacity of the charge pumps to a value based on the measured capacity (see Kawahara et al., page 129, 1st column, 1st paragraph and Fig. 1, sense and latch circuit).
- An array of memory cell because memory cells in Flash technology is set in an array arrangement (see Kawahara et al., Fig. 1, memory cell).
- It is inherent that the measurement and the analysis in Kawahara et al. is done using a computer because in Fig. 1, the decoder is interfaced to an

output port which serves for carrying out further analysis as shown in Figs. 9-11.

However, Kawahara et al. does not teach resetting the nominal capacity value of the charge pump to a second capacity value based on the actual capacity and then characterizing the second value of the charge pump as sufficient capacity to simultaneously affect a second number of flash memory cells.

Whereas the claimed invention includes all the features noted above and further includes a charge pump having a capacity that is preset to a particular value to simultaneously affect a first number of flash memory cells at a particular voltage and also reset the charge pump to a second value based on the measured capacity to simultaneously affect a second number of flash memory cells.

The remaining claims are dependent upon 1, 7, 13, 26 and 30 and contain further limitations.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elias Desta whose telephone number is (571)-272-2214. The examiner can normally be reached on M-Thu (8:30-7:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (571)-272-2216. The fax phone numbers for the organization where this application or proceeding is assigned are (703)-872-9306 for regular communications and After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)-272-1750.

Elias Desta
Examiner
Art Unit 2857

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October 7, 2004

